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# Revision of the manual

Due to software updates, your experience of the software interface (including but not limited to software features, user interfaces, and interaction experiences) may differ from the interface presented in this manual. The software interface is subject to change.

REFERENCE	DATE	UPDATES PARTS
MAN_DCBS_GM_EN_V1.0	January 2020	-
MAN_DCBS_GM_EN_V1.1	September 2022	Software update/Physical connection upgrade
	MAN_DCBS_GM_EN_V1.0	MAN_DCBS_GM_EN_V1.0 January 2020

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# Introduction

#### ABOUT ///////

E-XTEQ is a battery diagnostic tool and equipment manufacturer with a broad spectrum of knowledge and understanding of battery technology for Industrial, OE and Aftermarket Maintenance including EV/HEV applications.

Our mission is to be a passionate global leader of innovative measurement solutions by providing premium testing equipment and unsurpassed services to our valued customers and partners.

The GM DCBS supports battery diagnostic tests including functional true ½ CCA load test and provides a reserve capacity test. DCBS has built-in 12V/100A battery charger/maintainer that provides in-depth features and functions to stabilize battery voltage during ECU reflashing and is capable of charging different chemistry batteries.

The remote is a comprehensive battery analyzer with intuitive features and functions that promotes user friendliness, speed, accuracy and intelligence, enabling technicians to manage diagnostics through every step of the process from start to finish and can be used simultaneously.

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# Safety Guidelines 1/2

#### Please read the safety guidelines carefully.

This section indicates the areas that need to be protected in order to prevent harm to people who use this equipment, damage to property and to enable proper use of this product.

#### MAINTENANCE AND STORAGE ///////

Keep this product dry. Do not expose the DCBS to rain or snow.

Discontinue use and contact technical support if an overheat event has occurred, or if corrosion or deterioration has been identified in the cables or other parts of the product.

#### BEFORE USE ///////



Keep the exterior clean and free of dust. Do not disassemble or modify the main unit as it may cause an electrical shortage or fire. To reduce the risk of electrical shortage, unplug the AC power plug before cleaning and maintenance.

# Extreme caution: Keep liquids and conductive tools away from the DCBS while operating.

DCBS must be used in a well-ventilated area.

When operating the equipment make sure the surface is dry and clean to minimize any risks.



The battery contains chemicals that may generate explosive gases. Before handling the battery, remove all metal accessories such as rings, bracelets and necklaces. Short circuit at battery terminals may cause burns. Do not place batteries near flames or other heat sources.



The battery fluid is highly corrosive. If the battery fluid gets on your skin or clothes, immediately wash it with soap and water. If electrolyte gets in your eyes, immediately flush with cold water for at least 10 minutes and seek medical attention.



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# Safety Guidelines 2/2

#### USAGE PRECAUTIONS ///////

Do not use extension cords as there is a risk of fire and electrical shortage.

If use is necessary, check that the extension cord has the following:

- 1. Identical plug, cable size and the same electrical wiring as the DCBS.
- 2. Make sure the equipment is securely connected before use.

When unplugging the cord from the outlet, hold the frame of the plug to avoid damaging the plug or power cord. Pulling the cord may cause the cable plug to break. Replace power cord immediately if damaged.

If the outlet shape does not fit the plug, please contact the E-XTEQ service department. Phone: 1.877.453.3265 F-mail: support usa@e-yteg.com

E-mail: support.usa@e-xteq.com



Do not touch the power connector during use. Keep away and Do Not Touch restricted areas of this equipment.

#### DISASSEMBLY/DAMAGE/REMOVAL ///////

Do not disassemble the product or damage or remove the stickers or labels on the product. If the product's case has been disassembled or damaged by the user, all warranties will be void. Always contact a designated E-XTEQ Service Center for repairs.

Do not insert metallic objects into the unit to prevent electric shock, fire, short circuit, possible leaking of harmful substances and personal injuries. Do not store the product in a wet or humid place. Always store the product in a dry place.

#### CLEANING THE PRODUCT ///////

It is recommended that you clean the product by wiping it gently using a soft cloth. Do not use water, chemical substances or detergents. They may cause discoloration or corrosion to the product's exterior and may cause a fire or electric shock.



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#### SAFETY REMINDERS ///////

Please review the safety guidelines in this manual before using the DCBS for safety operations

When unplugging the DCBS, pull on the plug frame rather than the cord to reduce the risk of damaging the power plug or cord.

The DCBS is designed for indoor use. Use outside in dry weather only.

The GM DCBS enables a wide range diagnostic procedures with 0-15V/0-80A (100A Optional) charge capability.

#### APPEARANCE AND DIMENSIONS ///////

Dimension Details: Metrics: 1300 x 580 x 690 (mm) Imperial: 51.18 x 22.83 x 27.16 (inch) Weight: Kilogram: 67 (kg) Pounds: 148 (lbs.)







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#### TROLLEY LED'S ///////



**1. Charge –** The Charge LED will blink during diagnostic and charge operations.

**2. Wi-Fi Connection (Remote to Trolley only)** – The Wi-Fi connection LED will turn GREEN once connection is established or turn RED if connection is lost.

**3. Status –** If the Status LED is RED, the trolley has encountered an error.

**4. Load Test –** The Load Test LED will blink BLUE during a Load Test and a Reserve Capacity Test.

#### REMOTE PRESENTATION ///////



1	IR Thermometer
2	Connection to Trolley
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4	Remote Clamps Connection Port
5	Remote Connection Voltage Display
6	Trolley Connections Voltage
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#### REMOTE JOB STORAGE ///////

The remote has expandable storage through an SD card located on the right side of the tool inside the rubber protective boot.

The tool will come with a 16 GB removable SD card.

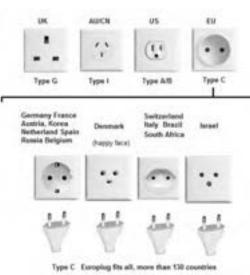
Acceptable sizes for replacements are 4GB, 8GB and 16GB formatted with FAT32 file system.

#### ACCESSORIES ///////

#### Power Cord

16.4 ft/5m power cord is supplied with the GM DCBS.

#### \*The cord will be suitable based on the destination country standards\*





#### Charge Cable with Clamp



The cable will be used for trolley diagnostic and charging.



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#### ACCESSORIES ///////

#### **Docking Station with Printer**



#### Accessories Box

- 1.8 Short Screws
- 2. 2 Long Screws
- 3. Printer Paper Roll
- 4. 1.5mm Specific Remote Clamps
- 5. 2 Hooks (For Rear of the Trolley)
- 6. 1 Hook (Docking Station)
- 7. USB Cable
- 8. Ethernet Cable (For Physical Connection)





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#### INSTALLATION ///////

The unit needs to be placed in a clean, dry and ventilated area.

Tools necessary to assemble trolley:

- 4mm Allen Wrench, 10mm Socket/Wrench. (Step 3, use long screws)
- 3mm Allen Wrench. (Step 4, use short screw)

Once the unit is out of the box, the next step is to connect the docking station to the trolley.

Then install the remote clamps hook and install the printer and the paper.

To use the remote by itself, connect the clamps on the side of the remote.















Caution: Insert screw carefully in step 3 to not damage cable with screw inside tube.

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#### BATTERY CABLE CLAMPS CONNECTION ///////

Remove the battery cable clamps from the box to connect them through the connector in the rear of the DCBS Trolley.





#### POWER CABLE CONNECTION AND POWER ON //////

Input power information

Voltage	100 – 240 V
Frequency	50/60 Hz
Consumption	2 kW Maximum

Connect the power cord to the connector located on the back of the DCBS, then connect the opposite plug to a standard electrical socket. Switch on the device by setting the switch to the "I" position.





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#### DEALER ID NUMBER ///////

After trolley has been setup, turn on the remote and follow the steps below to input the Dealer ID Number into the tool. (This number is required to generate warranty code).



**1.** Go to the Settings Menu.



**3.** Go to the BAC (Business Association Code) Icon.



2. Go to the Information Icon.



**4.** Input Dealer ID Number and Press Enter, then Back to Save.





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#### WI-FI CONNECTION (REMOTE TO TROLLEY ONLY) ///////



1. Turn on the Remote and go to the "Settings" icon.







4.Select your preferred Wi-Fi Frequency. (If this option is not available, continue to step 5)



5. Select "Bar-code Scan" for the tool to scan the trolley serial number or "Manual" to manually input the trolley serial number.

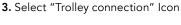
6. The Serial Number can be found on the back of the trolley. Refer to picture for visual confirmation.



This setting is to connect the Remote to the Trolley via Wi-Fi only. Physical connection via Ethernet cable will not work if the Wi-Fi setting is used. If the wireless connection between the Remote and Trolley is not stable due to Electromagnetic Interference, please use physical connection option explained below.







Reference: EL-52800-20 P/N: EZ-0211-A

S/N: DCTRS01GLT10006

Size (inch): 52.20\*22.72\*27.56 MFG Date: 2019 Weight (lbs): 148

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#### PHYSICAL CONNECTION (REMOTE TO TROLLEY ONLY) ///////



**1.** Turn on the Remote and go to the "Settings" icon.



3. Select the "OFF" Icon



**5.** Ensure the Ethernet Cable is connected to the trolley and remote as shown



2. Go to the "Wireless" icon.



**4.** The Wi-Fi logo will dissapear from the top of the screen



**6.** Verify connection by connecting a battery and confirming the voltage at bottom right



NOTE: Trolley and Remote will communicate only through the physical connection between them. Restart of Trolley and Remote may be required for proper physical connection communication.

#### UPDATE ///////

#### **Optimus software**

DCBS is delivered with a Software Installation Guide (OPTIMUS). Optimus connection is mandatory for product update, and also useful for data (history) storage.

To install OPTIMUS on your PC you can follow the instructions of the Software Installation Guide or the indications detailed in the section "Optimus installation" of this manual.

Your recently delivered device might need an initial update.





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#### UPDATE ///////

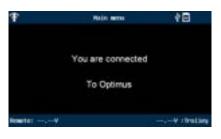
#### REMOTE UPDATE

To update the remote, please connect to Optimus (see Optimus installation Quick guide). When connecting your remote to Optimus (for job download) a new software update will be proposed if available.

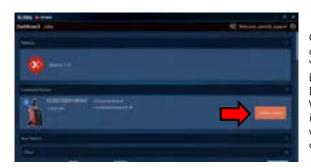




The following message will then appear.



On OPTIMUS software:



On your dashboard the device will appear. You can make the update by clicking on "Update Device" When clicking on the image of the product you will have access to its own dashboard.

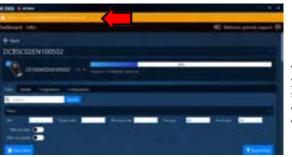


On the device dashboard You can also make the update by clicking on (Update to DCAG\*\_\*\*\_\*\*).



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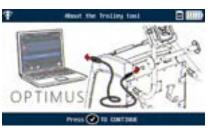
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When the update is finished, please click the eject button to be able to get out of the USB connecting mode.

#### TROLLEY UPDATE

When connected to the trolley, DCBS Remote might detect that an update is needed for the trolley.

The following message will then appear.



You will need to connect the trolley to your computer to update via USB cable.







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#### UPDATE ///////



On your dashboard the device will appear. You can make the update by clicking on "Update Device" when clicking on the image of the product you will have access to its own dashboard.



On the device dashboard you can also make the update by clicking on (Update to DTFE\*-\*\*\*)





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When the update is finished, please click the eject button to be able to get out of the USB connect mode. You will have to restart the trolley once you finished using Optimus.



Once the Trolley has updated, please reinitialize the connection with the remote to make sure the update is registered in the remote's memory.



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# Settings 1/2

#### PREFERENCES ///////

#### Personalize the user experience



From the Main Menu, the "Settings icon allows the user to personalize the user experience.

#### <u>Units</u>



Units can be set up on DCBS. The user has the option to select between Celsius and Fahrenheit.

#### Date and Time



Date and Time will be set automatically during and update, however, there is a manual setting of the date and time.

#### <u>Tool Box</u>



"Tool Box" has a Voltmeter and a thermal IR temperature reader.

#### Languages



From the Settings Menu, choose "Language" and then select your preferred language.

#### Auto Sleep



DCBS Remote is equipped with energy saver mode to reduce power consumption automatically if the device is not used for a certain period of time. The device will power off automatically after 5 minutes if device is not used. It can be disabled or can be set from 1 to 60 minutes.

#### Wi-Fi Settings



Wi-Fi settings to connect Remote to Trolley or Remote to Network (for job syncing to Argos). Follow respective instructions for this setting.

#### Sounds and Haptics



The user has the option to turn the sound and haptics on or off in the settings menu.



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#### OTHER SETTINGS ///////

#### Information



The Information Menu will give access to different extra settings and data about the tool.

#### <u>Update</u>



Update icon gives information about how to update the device. Updating application (OPTIMUS) can be downloaded at <u>www.e-xteq.com</u>



"Support" icon takes you to the next screen with the support informaiton.





"About" icon gives information regarding the Remote including serial number, software version, and more.

#### Dealer ID Number



Select "BAC" (Business Association Code) Icon to enter the Dealer ID number manually or by using the Barcode Scanner.



"Support" QR code gives information about how to contact technical support for assistance.



"Max Current" icon gives the possibility to choose between 100A and 80A for maximum charging current. 100A limit for charging current required a 20A Electrical Circuit.





# Diagnostic and Charge 1/24

#### REMOTE HANDHELD DIAGNOSTIC TESTER ///////

The Main Menu is the home screen of the tool. It gives access to all the available features of the DCBS remote. Internal Resistance test (CCA Test) is provided by the remote to determine the SOC and the SOH based on the battery voltage (V) and the internal resistance (mOhm).

#### Manual Selection of Battery.

Press any key to highlight the "Diagnostic" Icon. Press the ✔ button on the keypad to go to the next screen.



Select "Remote".







Select the battery type (Chemistry).



Use the navigation arrows to enter the value indicated on the battery (CCA SAE used in this example)



Select Battery Standard







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# Diagnostic and Charge 2/24

#### REMOTE HANDHELD DIAGNOSTIC TESTER ///////

The GM DCBS is equipped with a Make, Model, Year (MMY) database of GM vehicles from model year 2010 to current\* on MMY selection. VIN Scan is available from model year 2012 to current\*. \*The database is updated continuously.

#### Vehicle Selection from Database

Press any key to highlight the "Diagnostic" Icon. Press the ✔ button on the keypad to go to the next screen.



#### Select "Remote".



Select "Database".



Select "VIN Scan" (2012-Current) to scan the VIN of the vehicle and follow the Diagram.



The "Selected Vehicle" will come up once the VIN is scanned.

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EL maker	-	-
W. 004	100	arte la la
No. of Concession, Name	10	
Resa, Capacity	140	
EPL COA		- 40
C Delico Part#		
ford mader	00# 00064542	EDI
121 mater	NAME PROCEEDINGS	



If there is more than one battery per MMY, the tool will ask to make a selection.

÷ e		100/Envision	80
	2005	291.9	
	2057	2020	
	2017 2.6 hatter	2921	
	2018	2002	
	2000 2.4 Junior		
		Free a	1/3



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-Load Test & Results

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# Diagnostic and Charge 3/24

#### REMOTE HANDHELD DIAGNOSTIC TESTER ///////

If the VIN is not available to scan, select "Manual" and then select the "Make".





Select the Model and Year. (The year will include specifics like Engine or Trim level for vehicles with multiple OEM batteries per model year).





Confirm the Vehicle and Battery information. If battery has been changed, go to the EDIT button and select the correct battery information.



To enter the VIN manually, select "Key in VIN number" option.

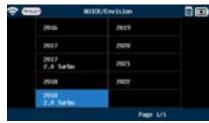


The "Selected Vehicle" will come up once the VIN is scanned.

	Which rep	
	HELDC / DISLOVE	/ 2982
Bettery type	ALM .	
EL maker	148	
0C 000A	100	
Non-House Street, or other	90	
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ford mater	007 00054542	EDIT
dill conter-	SOM PREMINITED IN	
RomiterW	Press @ 10 C	NTINE 12.10V (Truille



If there is more than one battery per MMY, the tool will ask to make a selection.



If no vehicle is found, the tool will follow the "Manual Battery Selection" stated above and the VIN will be carried to the end of the test.





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# Diagnostic and Charge 4/24

REMOTE HANDHELD DIAGNOSTIC TESTER ///////

### Start Diagnostic

Once the characteristics of the battery selected the tool will ask to measure the temperature of the battery.

# Do NOT point laser at individuals or reflective objects.

Press the  $\checkmark$  button on the keypad to go to the next screen.





Select battery terminal if these are accessible. (Bare terminals is recommended when doing diagnostic tests)



Enter the RO number that is associated with the JOB.



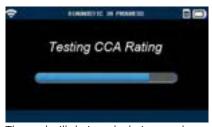
Press the 🜔 button to start the test.



If the terminals are not accessible, select Jump start post.



If the clamps are not connected, the tool will ask to connect the clamps.



The tool will do its calculations and come back with a result.



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-Wanual Selection of Battery -Vehicle Selection from Database

### -Start Diagnostic & Results

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# Diagnostic and Charge 5/24

REMOTE HANDHELD DIAGNOSTIC TESTER ///////

# Results (Remote CCA Test)

Three different possible screen results:



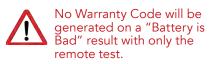
Battery is Good (Satisfactory SOC and SOH)



Battery is BAD (unsatisfactory SOH regardless of SOC). A diagnostic with the trolley is advised.



Battery needs to be recharged (Unsatisfactory SOC, good SOH).



After Diagnostic Test has been performed, go to the print icon to print the receipt of the result.

Remote has to be placed in the Docking Station to print.





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# Diagnostic and Charge 6/24

#### TROLLEY DIAGNOSTIC ///////

### Complete Diagnostic

DCBS Trolley provides a fully automatic process following a Smart Logic test sequence and can generate a warranty code, needed for warranty claims. To start the automatic diagnostic, select Diagnostic from the Main Menu and then select Trolley.

#### Trolley Diagnostic needed for Warranty Claims



The Automatic Diagnostic performed by DCBS includes:

**-Internal resistance test (CCA test).** To determine the SOH and SOC based on the battery voltage (V) and internal resistance (mOhm);

-Load test (Half CCA). Pass / failed test to simulate a cranking based on the voltage (V) evolution depending on time(s);

- **Reserve capacity test.** Pass / failed test based on a load to discharge and check the battery voltage (V) response;

- **Charge acceptance.** Dynamic tests to diagnose if the battery can accept the charge (100A range).

Follow the steps in Manual Battery Selection or Database Selection to select the battery information. (See section "Manual Battery Selection" and Vehicle Selection from Database" listed above).





If the remote is not connected to the trolley via Wi-Fi, connection will be attempted automatically. If Physical Connection option is selected, RJ45 cable must be connected to Remote and Trolley at the start of the test.





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# Diagnostic and Charge 7/24

#### TROLLEY DIAGNOSTIC ///////

After vehicle or battery selection is made and connection to the trolley established, the tool will ask to measure the temperature of the battery.

# Do NOT point laser at individuals or reflective objects.



Press the  $\checkmark$  button on the keypad to go to the next screen.



If the terminals are not accessible, select Jump Start Post (limits the current injected into the chassis to 40A).



If the clamps are not connected, the tool will ask to connect the clamps.



Press the **O** button to start the Diagnostic test. If everything is connected properly, the tool will perform the test and display the result.



Select battery terminal if they are accessible. (For Diagnostic, it is always recommended to test at bare battery terminals for most accurate results).



Enter the RO number that is associated with the JOB.



Remote needs to be on the docking station for Diagnostic to start.



If the battery voltage is too low, the tool will perform a pre-charge on the battery, and then continue with the diagnostic test.



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DCBS User Manual / Ref. MAN\_DCBS\_GM\_EN\_V1.0

# Diagnostic and Charge 8/24

TROLLEY DIAGNOSTIC ///////

# Results - (Complete Diagnostic)

Four different possible result screens.



Battery is GOOD (satisfactory SOC and SOH).



Battery needs to be recharged (Unsatisfactory SOC, Good SOH).



Battery is BAD (unsatisfactory SOH, regardless of SOC).



If the test is canceled, the tool will show "Terminated by User".

To generate a warranty code, the tool will ask the user to input the VIN, RO, and Dealer Identification Number (BAC). All three fields are mandatory for a warranty code to be generated.



BAC and RO should be automatically populated. VIN may need to be inserted depending on which method was used to start the test.



After Complete Diagnostic has been performed, go to the print icon to print the receipt of the result. Remote has to be replaced in the Docking Station to print.



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# Diagnostic and Charge 9/24

#### PRE-DELIVERY INSPECTION ///////

### PDI (Pre-Delivery Inspection)

DCBS Trolley has an option for the dealership to use during a PDI. PDI Icon will follow GM specifications for Pre-Delivery Inspection. (No Warranty code will be generated during PDI.)

DCBS User Manual / Ref. MAN\_DCBS\_GM\_EN\_V1.0



PDI will perform a 20 minute charge on the battery.

Follow the steps in Manual Battery Selection or Database Selection to select the battery information. (See section "Manual Battery Selection" and Vehicle Selection from Database" listed above).





If the remote is not connected to the trolley via Wi-Fi, connection will be attempted automatically. If Physical Connection option is selected, RJ45 cable must be connected to Remote and Trolley at the start of the test.



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# Diagnostic and Charge 10/24

#### PRE-DELIVERY INSPECTION ///////

After vehicle or battery selection is made and connection to the trolley established, the tool will ask to measure the temperature of the battery.

# Do NOT point laser at individuals or reflective objects.



Press the  $\checkmark$  button on the keypad to go to the next screen.



If the terminals are not accessible, select Jump Start Post (limits the current injected into the chassis to 40A).



If the clamps are not connected, the tool will ask to connect the clamps.



Press the **O** button to start the Diagnostic test. If everything is connected properly, the tool will perform the test and display the result.



Select battery terminal if they are accessible. (For PDI, it is recommended to test at bare battery terminals for most accurate results).



Enter the plate number and the VIN of the vehicle. (the VIN is mandatory to start).



Remote needs to be on the docking station for Diagnostic to start.



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# Diagnostic and Charge 11/24

PRE-DELIVERY INSPECTION ///////

### <u>Results - (PDI)</u>

Three different possible result screens.



Battery is GOOD (Battery Charged for 20 minutes)



If the test is canceled, the tool will show "Terminated by User".



Unable to complete PDI, Run Diagnostic. (PDI couldn't complete, Run Trolley Diagnostic to determine if battery needs to be changed.)



After PDI has been performed, go to the print icon to print the receipt of the result. Remote has to be replaced in the Docking Station to print.





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# Diagnostic and Charge 12/24

#### CHARGE ///////

#### <u>Charge</u>

"Charge" Icon will be used to charge the 12V batteries. Charge acceptance allows to diagnose if and how the battery can accept the charge (100A range). During the dynamic charge, and depending on the battery reaction during the charge, intermediate tests can detect different issues with the battery (Sulfation, etc.).



In the "Charge" Icon, the user has the option to select between "Normal Charge mode" (40A) and "Fast Charge Mode" (80A/100A).





Follow the steps in Manual Battery Selection or Database Selection to select the battery information. (See section "Manual Battery Selection" and Vehicle Selection from Database" listed above).









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# Diagnostic and Charge 13/24

#### CHARGE ///////

After vehicle or battery selection is made and connection to the trolley established, the tool will ask to measure the temperature of the battery.





Press the  $\checkmark$  button on the keypad to go to the next screen.



If the terminals are not accessible, select Jump Start Post (limits the current injected into the chassis to 40A).



Remote needs to be on the docking station for Diagnostic to start.



The tool will automatically perform a charge on the selected battery and the Remote will display the charging information.



Select battery terminal if they are accessible.



If the clamps are not connected, the tool will ask to connect the clamps.



Press the **O** button to start the Diagnostic test. If everything is connected properly, the tool will perform the test and display the result.



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# Diagnostic and Charge 14/24

CHARGE ///////

# <u> Results - (Charge)</u>



If the charge finishes with no issues, the tool will show "Battery is Charged".



If the clamps are not detecting the battery correctly, the result will come back as "Clamp Connection Failure" and the test must be performed again.





After 24 hours of charge (or<0.2A) with no issues, the Charge result will come back as "Battery is fully Charged".



If an issue is found with the battery, the tool will show a battery with an X through it.



If an issue is found with the battery, the result will display showing the charge result as "Not Done".





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# Diagnostic and Charge 15/24

CHARGE (LI-ION 12V BATTERIES) ///////

### Lithium Ion 12V Batteries

DCBS has the option to Charge and "Wake-Up" a Li-Ion battery. To select this option, go to "Manual Battery Selection" after selecting "Normal" or "Fast" Charge and select "Li-Ion" as the Battery Chemistry.





#### Select the Battery Standard and the Value. (CCA SAE shown here)





After battery selection is made and connection to the trolley established, the tool will ask to measure the temperature of the battery.



# All of harding tareloads 73.85 °F Press © IE CRETARE

Press the  $\checkmark$  button on the keypad to go to the next screen.



If the terminals are not accessible, select Jump Start Post (limits the current injected into the chassis to 40A).



Select battery terminal if they are accessible.



If the DCBS does not detect any voltage, it will ask to attempt recovery of the Li-Ion Battery. Press the ✓ button for Recovery.



# Diagnostic and Charge 16/24

CHARGE (LI-ION 12V BATTERIES) ///////



# PLEASE PAY ATTENTION TO THE FOLLOWING WARNING SCREENS FOR YOUR SAFETY



Confirm that Li-Ion Recovery Mode is the desired action.



Press the O button to start the Li-Ion Recovery procedure.



If everything is connected properly and the Li-Ion 12V battery is awake, the DCBS will start the charge normally.



Confirm the Clamps are connected properly to the Li-Ion 12V battery.



If the recovery procedure is successful, the DCBS will wake up and charge the Li-Ion 12V battery.



If the recovery procedure is unsuccessful, the tool will display a Bad Battery result. (No warranty code will be generated)

See "RESULTS - CHARGE" section above for other end result possibilities.





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# Diagnostic and Charge 17/24

### EDM (ENHANCED DIAGNOSTIC MODE) ///////

#### EDM (Enhanced Diagnostic Mode)

The DCBS will perform stand alone Load Tests and Reserve Capacity Tests as well as a Power Supply Mode for ECU Re-flashing. They can be found under the EDM icon on the main menu.



### Load Test

Load test is a pass/fail test to simulate a cranking based on the voltage (V) evolution depending on time (s). Load Test Icon will perform a half CCA test on the battery.

# 12.50V circline



The option to select the battery type will show to select between Flooded, AGM, and EFB batteries.



Use the navigation arrows of the keypad to enter the value indicated on the battery (CCA SAE value in this example).





Then select the Battery Standard.



The tool will ask to measure the temperature of the battery. Press the  $\checkmark$  button on the keypad to go to the next screen.







## Diagnostic and Charge 18/24

### EDM (ENHANCED DIAGNOSTIC MODE) ///////

If the clamps are not connected, the tool will ask to connect the clamps. Remote needs to be on the docking station to Start.





Press the 🜑 Icon to start the Load Test.



The Load Test can take up to 45 seconds.



Once the Load Test is done, a graph will display the waveform of the Voltage Drop and Recovery.





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## Diagnostic and Charge 19/24

EDM (ENHANCED DIAGNOSTIC MODE) ///////

## Results - (Load Test)



Load Test GOOD (Satisfactory SOC and SOH).



If the test is canceled, the tool will show "Terminated by User".



Load Test Not OK (Unsatisfactory SOH, regardless of SOC).



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## Diagnostic and Charge 20/24

TROLLEY DIAGNOSTIC ///////

## **Reserve Capacity Test**

Reserve Capacity test is a pass/fail test based on a load to discharge and check the battery voltage (V) response.



The option to select the battery type will show to select between Flooded, AGM, and EFB batteries.

### Then select the battery standard.





Use the navigation arrows of the keypad to enter the value indicated on the battery (CCA SAE value in this example).



The tool will ask to measure the temperature of the battery.





Press the  $\checkmark$  button on the keypad to go to the next screen.





## Diagnostic and Charge 21/24

### TROLLEY DIAGNOSTIC ///////

If the clamps are not connected, the tool will ask to connect the clamps. Remote needs to be on the docking station to Start.





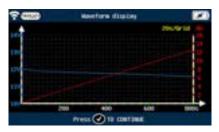
Press the 🜔 Icon to start the RC Test.



The RC Test can take up to 15 minutes.



Once the RC Test is done, a graph will display the waveform of the Voltage Drop and Amp Hours removed.





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## Diagnostic and Charge 22/24

TROLLEY DIAGNOSTIC ///////

## Results - (Reserve Capacity Test)



Battery is GOOD (Battery passed the RC Test).



If the test is canceled, the tool will show "Terminated by User".



Battery is BAD (Battery Failed the RC Test).



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## Disgnostic and Charge 23/24

TROLLEY DIAGNOSTIC ///////

## Power Supply Mode

Power supply mode is used when performing an ECU reflash on a vehicle. The maximum current will be limited to 75A on this mode.



The option to select the battery type will show to select between Flooded, AGM, and EFB batteries.

#### Then select the battery standard.

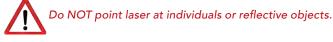




Use the navigation arrows of the keypad to enter the value indicated on the battery (CCĂ SAE value in this example).



The tool will ask to measure the temperature of the battery.





Press the ✓ button on the keypad to go to the next screen.





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## Diagnostic and Charge 24/24

## TROLLEY DIAGNOSTIC ///////

If the clamps are not connected, the tool will ask to connect the clamps. Remote needs to be on the docking station to Start.





Press the **O** Icon to start the Power Supply Mode.



The Power Supply Mode will not stop automatically. The user must physically stop the charge once the ECU reflash is complete



When the user has stopped the test, the screen will display one of the two Results below.



"Terminated by User" will be displayed if the current is above 7.5A when the test is stopped.



"Battery is Charged" will be displayed if the current is below 7.5A when the test is stopped.





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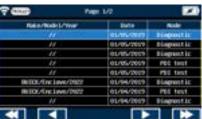
## Results Storage 1/1

### HISTORY ///////

The History Icon in the Main Menu shows the records of previous tests performed with the Trolley and with the Remote.



Go to the "History" icon.



Pressing the V button will show more information regarding the partitest that was done.



Select the job you are interested in and press the "Detail" icon.

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Select the job you are interested in and select the "Print" icon.



Select "History" icon again.

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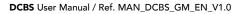
There is the option to view the full information, to delete the record, or print the receipt again.

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The details will be displayed.



The remote must be placed in the docking station in order to print.





## Optimus 1/5

### OPTIMUS INSTALLATION ///////

All charging data (jobs) performed by DCBS are stored and can also be uploaded into a dedicated program: OPTIMUS.

When a new software update is released, OPTIMUS will automatically propose to update the DCBS upon connection of its Remote via its dedicated USB cable.

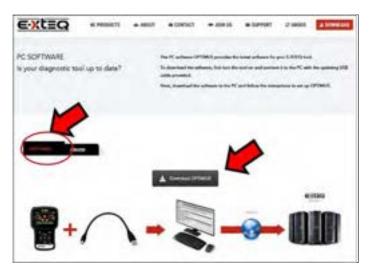
If the Trolley needs to be updated, when connecting to it, Remote will display the following message "Please update the trolley with Optimus".

To download OPTIMUS, open a web page on the computer and go to the web site: http://e-xteq.com.

Click on the DOWNLOAD tab



Then click on the "Download OPTIMUS" button.



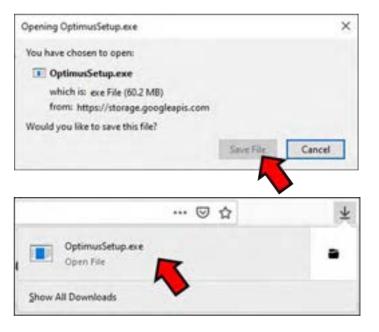




## Optimus 2/5

OPTIMUS INSTALLATION ///////

Open the download is finished, you can save and open the executable file "OptimusSetup.exe".



The first time you even open OPTIMUS, you have to create an account. Click on "Don't have an account yet?" link.







# Optimus 3/5

OPTIMUS INSTALLATION ///////

Fill up all the empty fields, check the "I'm not a robot" box and then click "Register"

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An internet page will open with your settings. Meanwhile, you will receive an email to confirm your email address.

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It is very important to confirm your email address by clicking on the link received. (If the link isn't clickable from the mail body, display the email in a web browser.

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## Optimus 4/5

### USING OPTIMUS ///////



Depending on the configuration of your computer installation, it may be necessary to create an authorization to ARGOS IP Address: 35.204.186.65.

### You can now use OPTIMUS, using your credentials.



You will then have access to your dashboard.

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When connecting your tool, it will appear in "Connected Devices". All the recorded job files will be transferred automatically.



Clicking on the image of the product will give you access to the tools Dashboard.

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# Optimus 5/5

### USING OPTIMUS ///////

If a new software update is available, this update will be proposed. If the latest version is already installed, "Your device is up to date" will be shown.

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Jobs can be found under the "JOBS" tab. They can be filtered and also exported into a CSV file.



"Apply Filter" will show a list of jobs. Click on the job to see the detail. It is possible to generate and download a PDF file of the job.

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When you want to leave OPTIMUS, please click the eject button to safely eject the USB that is connected from the tool.







## Support Information 1/2

FROZEN BATTERIES ///////



If the battery temperature is too low, (below 32°F / 0°C) the tool will show a battery with an X through it and have an audible chime simultaneously.

Charging a frozen battery is not recommended.

Please warm up the battery to room temperature before charging.

#### SULFATED BATTERIES ///////



If sulfation is found on the battery, the tool will show a battery with an X through it and audible chime simultaneously.

WRONG BATTERIES ///////



If a wrong value on the battery type is detected, the tool will show a battery with an X through it and have an audible chime simultaneously.

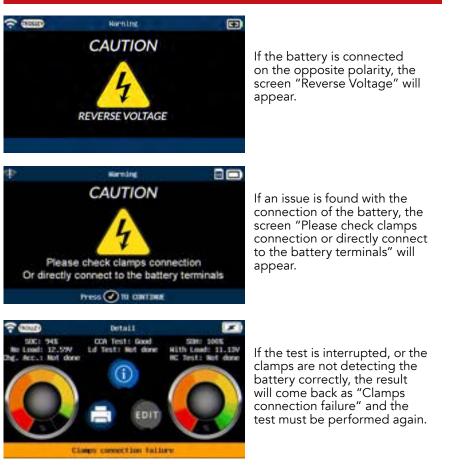


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## Support Information 2/2

ERROR MESSAGES ///////



### ERROR MESSAGES ///////

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If you have a problem with OPTIMUS requiring support, please note your OUID Number (OPTIMUS/Settings). OUID number will be requested by the customer support service.

LOCAL SUPPORT ///////

North America: E-XTEQ Technical Support 1-877-453-3265 support.usa@e-xteq.com www.e-xteq.com





## Warranty

### LIMITED WARRANTY ///////

The DCBS product is backed by a Limited 2-Year Warranty. The warranty covers manufacturer defects and workmanship. The warranty excludes misuse or abuse and normal wear and tear.

All accessories are backed by 1-Year Warranty for manufacturer defects only.

All accessories with a 1-Year Warranty are listed below. Please read "How to obtain warranty" instructions in order to receive the correct parts and prevent any charges.

ACCESSORIES:

AC Power Cord Charge Cable with Clamps Remote Clamps Printer USB Cable

#### HOW TO OBTAIN WARRANTY ///////

Before sending a unit back for repair, an RMA (Return Materials Authorization) number must be obtained by contacting E-XTEQ Technical Support

#### North America:

E-XTEQ Technical Support 1-877-453-3265 <u>support.usa@e-xteq.com</u> <u>www.e-xteq.com</u>

E-XTEQ will ascertain if the unit needs to come in for repair or replacement. If the unit has to be replaced, E-XTEQ will provide full instructions in order for the end user to receive the replacement parts in the shortest delay.





Detroit, Paris, Yokohama, Shanghai, Taïwan & Queretaro.

www.e-xteq.com

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